

Section 3.5 Slopes of Lines

Obj: Find the slope of a line

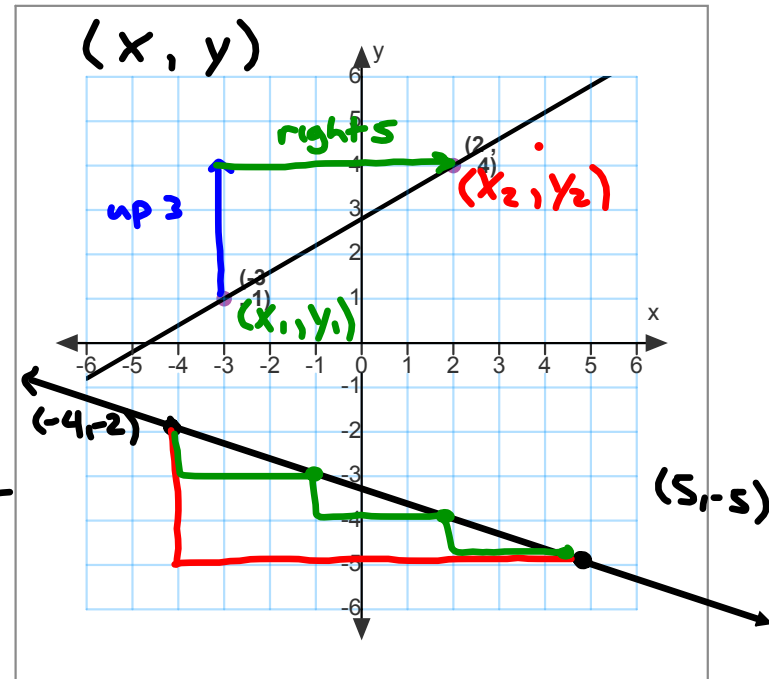
use slope to identify parallel and perpendicular lines

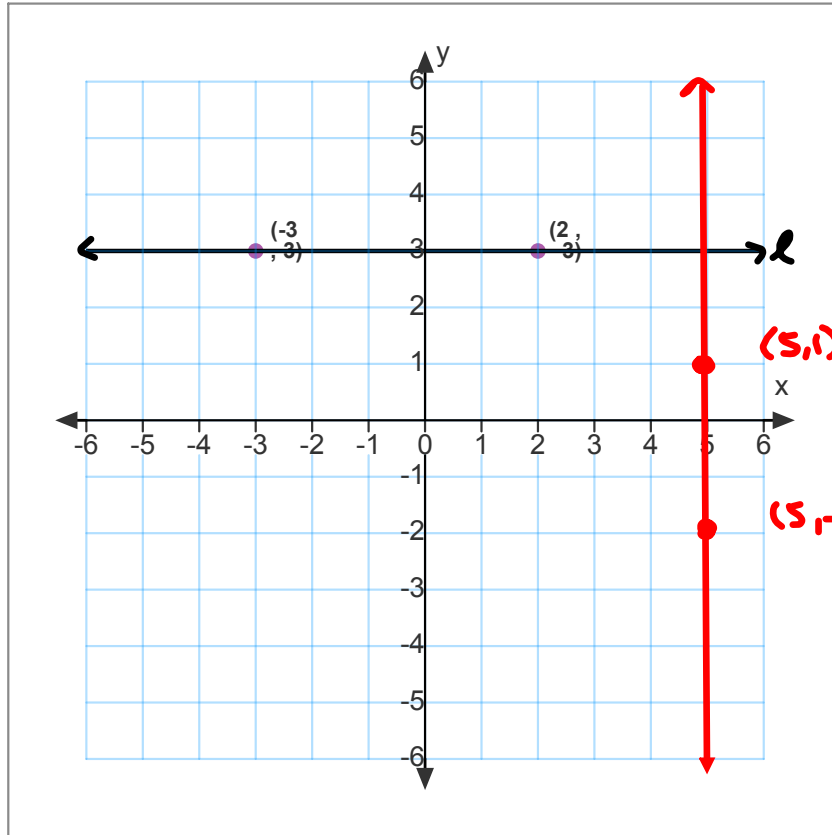
Slope formula

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{\text{rise}}{\text{run}}$$

$$m = \frac{4 - 1}{2 - (-3)} = \frac{3}{5}$$

$$m = \frac{-5 - (-2)}{5 - (-4)} = \frac{-3}{9} = -\frac{1}{3}$$





$$m = \frac{0}{5} = 0$$

$$m = \frac{3}{0} \text{ undefined}$$

$$(5, -2)$$

If two lines have the same slope, then they are parallel

If two lines slope have a product of -1 , then the lines are perpendicular

Draw a parallel and perpendicular
to l passing through $(3,2)$

$$m = \frac{2}{3}$$

$$\perp m = -\frac{3}{2}$$

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1-5 all

21-28 all

30-36 even

46-49 all

